



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,188	08/01/2003	Shandor G. Daroczi	10031.000100	3172
74254	7590	08/20/2008	EXAMINER	
Okamoto & Benedicto LLP P.O. Box 641330 San Jose, CA 95164-1330				MAYEKAR, KISHOR
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
08/20/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/633,188	DAROCZI ET AL.	
	Examiner	Art Unit	
	Kishor Mayekar	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 08 July 2008.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4, 6-14 and 16-22 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-4, 6-14 and 16-22 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8 July 2008 has been entered.
2. Applicant's arguments with respect to claims 1-4, 6-14 and 16-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-3, 6-12, 16-18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada (US 2002/0059952) in view of Gee (US 5,468,652) and Pack, Sr. (US 3,993,505). Shimada's invention, a reference cited in the last Office action, is directed to a solar battery module. Shimada discloses that the solar module comprises a

plurality of solar cells connected to one another by separate and discrete pieces of interconnect leads 3, wherein each of the solar cells has an area of first electrical polarity and an area of a second electrical polarity with a plurality of contact points on each of the areas and wherein the interconnect leads couple the contact points of the two successive solar cells (Figs. 4-6). The differences between Shimada and the above claims are the requirement for the solar cells to be back contacted solar cells and the recited interconnect leads.

As to the former, Gee, another reference cited in the last Office action, teaches back-contacted solar cells having metal grids of n-type and p-type contacts formed on the backside of the solar cells (Fig. 1 and col. 2, lines 10-30). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Shimada as shown by Gee because this would result with back-contact cells having no grid obscuration losses, Shimada's module assembly is simplified.

As to the latter, Pack teaches an interconnector for the connection of solar cells wherein the interconnector is of the type recited with ties and slits (Figs. 3-5; and paragraphs 3 and 6 in col. 4). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Shimada and Gee as shown by Pack because this would result in having an interconnect lead with a large expansion length and a reduced amount of buckling.

With respect to the subject matter of claim 7, Shimada discloses it in paragraph

60.

With respect to the subject matter of claim 21, Shimada discloses it in Fig. 4.

5. Claims 1-3, 6-12, 16-18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada (US 2002/0059952) in view of Gee (US 5,468,652) and Glenn (US 5,100,808). Shimada is applied as above. The differences between Shimada and the above claims are the requirement for the solar cells to be back contacted solar cells and the recited interconnect leads.

As to the former, Gee, another reference cited in the last Office action, teaches back-contacted solar cells having metal grids of n-type and p-type contacts formed on the backside of the solar cells (Fig. 1 and col. 2, lines 10-30). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Shimada as shown by Gee because this would result with back-contact cells having no grid obscuration losses, Shimada's module assembly is simplified.

As to the latter, Glenn teaches an interconnector for the connection of solar cells wherein the interconnector is of the type recited with a stress relief portion (Fig. 6 and column crossing paragraphs 3 and 4). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Shimada and Gee as shown by Glenn because this would result in having an interconnect lead with strain relief.

6. Claims 1-3, 6-12, 16-18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada (US 2002/0059952) in view of Gee (US 5,468,652) and JP 01-198,082 A. Shimada is applied as above. The differences between Shimada and the above claims are the requirement for the solar cells to be back contacted solar cells and the recited interconnect leads.

As to the former, Gee, another reference cited in the last Office action, teaches back-contacted solar cells having metal grids of n-type and p-type contacts formed on the backside of the solar cells (Fig. 1 and col. 2, lines 10-30). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Shimada as shown by Gee because this would result with back-contact cells having no grid obscuration losses, Shimada's module assembly is simplified.

As to the latter, JP '082 teaches an interconnector for the connection of solar cells wherein the interconnector is of the type recited with a stress relief 11a and a mesh structure A (see abstract and Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Shimada and Gee as shown by JP '082 because this would result in having an interconnect lead with a decreased distance between solar cells and a stress relief.

6. Claims 4, 13, 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada "952 in view of Gee '652 and one of Pack '505, Glenn '808 or JP '082 as

applied to claims 1-3, 6-12, 16-18 and 20-22 above, and further in view of Dran et al. (US 4,32,418). The difference between the references as applied above and the instant claims is the requirement of a specific material for the conductive material. Dran teaches in solar photocell panels the cells are interconnect with strips of tinned copper or tin coated copper (col. 3, full paragraph 5). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown by Dran because tin coated copper exhibits good electrical conductivity and the selection of any of known equivalent material would have been within the level of ordinary skill in the art.

Response to Arguments

7. Applicant's arguments filed 8 July 2008 have been fully considered but they are not persuasive because of the new grounds of rejections as set forth in the paragraph above.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kishor Mayekar/
Primary Examiner
Art Unit 1795